CLAIMS

I claim:

1. A computer implemented method for constrained searching of an index of a database, the information of the database stored as a plurality of records;

sequentially assigning a unique location to each indexable portion of information of the database;

writing index entries in a memory, each index entry including a word entry representing a unique indexable portion of information, and one or more location entries for each occurrence of the unique indexable portion information;

sorting the index entries according to a collating order of the word entries, and sequentially according to the location entries of each index entry;

parsing a query to generate a first term and a second term related by an AND logical operator, the AND operator requiring that a first index

entry corresponding to the first term and a second index entry corresponding to the second term must both have locations in the same record to satisfy query; and

sequentially searching the first and second index entries subject to one or more constraints which must be satisfied.

2. The method of claim 1 where each constraint is expressed as $C(\mathbf{a}) \leq C(\mathbf{b}) + K$, where:

$C(\mathbf{a})$ means a current location of the first index entry,

$C(\mathbf{b})$ means a current location of the second index entry, and

K is a predetermined constant.

3. The method of claim 2 further comprising:

satisfying one of the constraints by reading locations of the second index entry until the current location of the second index entry is at least equal to the current location of the first index entry plus the predetermined constant.

4. The method of claim 1 further comprising:

satisfying a constraint having a greater current location before satisfying a constraint having a lesser current locations.

5. The method where each index entry is associated with a scan rate for indicating how fast the locations of the index entry are being read, and satisfying a constraint associated with an index entry having a higher scan rate before satisfying a constraint associated with an index entry having a lower scan rate.